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EFFICACY OF LOCO-REGIONAL TREATMENT FOR HEPATOCELLULAR CARCINOMA PRIOR TO LIVING DONOR LIVER TRANSPLANTATION

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BACKGROUND: The therapeutic approach for HCC has changed significantly in the past decade. Milan criteria have remained the paradigm for the selection of the best candidates for LT in the past 10 years. Down-staging of HCC is an attractive alternative to simply expanding the tumor size limits to meet Milan criteria. Aim: The aim of this study was to evaluate the outcome Of HCC patient after liver transplantation who received pre-transplant loco-regional treatment. MATERIALS AND METHODS: Data was retrieved from the files of patients with (HCC) who underwent liver transplantation and received pre-transplant loco-regional treatment during the period from December 2011till December 2013. (A) Pre-treatment assessment including Full personal history taking and thorough clinical examination, Alpha fetoprotein (AFP) level, Child Pugh score, MELD score, waiting time for liver transplantation., abdominal ultrasound and duplex, triphasic spiral CT or MRI abdomen before and after loco-regional therapy B) Histopathological evaluation of the explants: including :number of HCC nodules, size. Grade based on the Edmondson and Steiner criteria, presence of viable malignant cells and microvascular or capsular invasion.
RESULTS: The mean age for the enrolled patients was 52±7.04, 93.1% were males, mean MELD was 8.23±1.89, 41.38% were Child B, and 10 patients were Child C. Mean waiting time from the last intervention to transplantation was 8.48±6.83 months, mean AFP before loco regional therapy was 308±1240 ng/dl while after loco regional therapy it became 47.41±112.15 ng/dl (p=0.013). Twenty two patients were within the Milan criteria and 7 patients were beyond Milan criteria. Eighty focal lesions (range 0.6-6cm; mean: 2±1.09cm) were subjected to loco regional therapy; 10 patients underwent RFA, 11 patients had TACE, one patient underwent microwave ablation and 7 patients had several sessions of RFA and TACE.
The histopathological findings of the explanted livers showed complete necrosis in 28 lesions, partial necrosis in 3 lesions and 21 lesions turned to be macro degenerative and dysplastic nodules. There was statistical significant discrepancy in total focal lesions size between the results of the last triphasic CT before transplantation and the histopathological findings (p=0.01); also, there was statistical significant differences between both as regards the interpretation of well ablated lesions (complete necrosis) (p=0.001).However, there was no statistical significant difference between the imaging modality and histopathology regarding the number of focal lesions (p=0.14).
CONCLUSIONS: Loco regional therapies provide good option for patients on waiting list for liver transplantation, and patients not fulfilling Milan criteria as test of time to assess the biological behavior of the tumor. However, Liver transplantation is the therapy of cure even for those with apparently successful loco regional therapy.

ASSESSMENT OF HEALTH RELATED QUALITY OF LIFE IN EGYPTIAN RECIPIENTS AFTER LIVING DONOR LIVER TRANSPLANTATION

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Background and aims: Understanding the issues pertaining to quality of life is essential for any disease. It is particularly important in orthotropic liver transplantation (OLT) recipients. The aim of this study was to evaluate the impact of liver transplantation on the Quality of life in Egyptian recipients after LDLT. Methods: Methods: prospective study carried out in Ain Shams Center for Organ Transplantation, Cairo, Egypt .It included 35 recipients evaluated for health related quality of life using Short Form 36 score (Arabic version) and Beck Depression Inventory scores pre-transplantation 1, 3and 6 months after. Results: the mean age for the patients were 49.27 ± 8.16, 91.43% were males; 48.57% of study patients were highly educated. Fifty seven percent were Child C, mean MELD was 18, 26 patients were transplanted for HCV related end stage liver disease (ESLD) whereas 9 patients were transplanted for HCC. Our results showed highly statistically significant improvement in all dimensions of HRQOL after liver transplantation. Physical functioning was 45.00±34.34 before liver transplantation while one month and six months after liver transplantation it was 57.50±20.66 and 74.83±19.27 respectively (p>0.001). The least QOL score before, one month and six months after liver transplantation was role limitation due to physical health dimension with means of 21.67±40.86, 0.00± 0.00 and 50.83±29.71 respectively (p>0.001). The mental health dimension was the highest QOL score before liver transplantation with a mean of 51.60±21.49 and after one and six months it was 68.53±12.24 & 79.20±8.62 respectively (p>0.001). Seventeen patients completed their first year after liver transplantation and the results showed statistically significant improvement in all dimensions of HRQOL one year after liver transplantation except in the mental health, role emotional and social function domains; the scores of these domains significantly improve during the 6 months after transplantation, but plateau by 1 year post transplantation. Beck Depression Inventory scores showed significant improvement by one year after liver transplantation (p=0.03).Conclusion: Health related quality of life is important aspect of liver transplantation procedure that shouldn't be neglected.

HYBRID MICROSURGICAL RECONSTRUCTION AND PERCUTANEOUS ENDOVASCULAR STENT PLACEMENT FOR MANAGEMENT OF DISSECTED GRAFT HEPATIC ARTERY DURING LIVING DONOR LIVER TRANSPLANTATION.

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Hepatic artery reconstruction is a crucial step in living donor liver transplantation (LDLT) because arterial complications can lead to graft loss. Intra-operative dissection of the recipient artery is usually self-limiting and can be managed by anastomotic revision or using another recipient artery. However, dissection of the graft artery is more dramatic and requires repair. Endovascular interventions are useful in the management of post-operative arterial complications and are employed in many centers prior to open surgery however, they have not been reported in a combined intraoperative approach. We report a case of intra-operative graft artery dissection and occlusion during LDLT that was successfully managed with hybrid microsurgical reconstruction and percutaneous endovascular stent placement.

SEVERE ANEMIA WITH SOFOSBUVIR BASED THERAPY FOR HEPATITIS C (HCV) RECURRENCE POST LIVER TRANSPLANTATION ON MYCOPHENOLATE MOFETIL (MMF)

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HCV recurrence post liver transplantation is universal, affecting the patient and graft survival. Sofosbuvir is a direct acting antiviral without interaction with Calcinurin inhibitor or MMF. In treatment of HCV genotype 1 and 4 Sofosbuvir can be used with ribavirin alone for 24 weeks or in combination with peg interferon alfa-2a (Peg-INF) and ribavirin for 12 weeks duration.
Method: This is a retrospective review of patients receiving Sofosbuvir based therapy in our center from February 2014 tell now for histologic HCV recurrence post liver transplant. Immunosuppression was mainly tacrlomius with or without MMF. 12 patients had Sofosbuvir, Ribavirin and Peg-INF (triple therapy), while 7 patients had Sofosbuvir, Ribavirin without Peg-INF (dual therapy). Most patients had HCV recurrence stage 2 fibrosis or more on liver biopsy.
Results: To date, a total of 19 patients were included. (12 genotype 4, 5 genotype 1b, 1 genotype 2, 1 mixed genotype). Mean Age was 58, and the cohort had 10 males. Mean baseline HCV RNA was 6.6 log10 IU/ml and 3 patients had graft cirrhosis. All patients were treatment experienced either before or after the liver transplant. Twelve patients were treated with triple therapy for 12 weeks, one patient treated with dual therapy for 12 weeks (genotype 2) and the remaining 6 patients were treated with dual therapy for 24 weeks. Anemia was the commonest side effect affecting 11 out of 19 (58%) requiring epoetin Alfa, of which 4 patients required blood transfusion with reduction in ribavirin dose in all patients and discontinuation of peg-INF in 2 patients. The mean time of development of anemia was 6.5 weeks from starting therapy (4-10 weeks). Anemia developed mainly in 8 patients from the 12 who received triple therapy (67%) compared to 3 out of 7 patients on dual therapy (43%). All these cases had severe anemia with drop of 4-9 g of Hb from the base line reaching as low as 5.5 g/dl developed in patients receiving MMF as part of immunosuppressive regimen. Our cohort had 7 patients on MMF, of which 6 developed anemia, and out of that one was on dual therapy and 5 was on triple therapy. MMF was discontinued in all these patients during therapy. Currently we discontinue MMF before starting HCV treatment.
Conclusion: Anemia is more sever with the concomitant use of MMF with Sofosbuvir, Ribavirin and Peg-INF in the treatment of HCV recurrence post liver transplant. we suggest avoiding MMF if clinically feasible before starting this regimen. More data is needed before drawing a solid conclusion.

REGRESSION MODEL TO PREDICT THE FUTURE PREVALENCE OF HCV IN HEMODIALYSIS

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Background: Patients undergoing hemodialysis (HD) are at increased risk of contracting HCV infection (HCV). Adherence to infection control measures has resulted in decreasing the prevalence of HCV in HD patients in Kingdom of Saudi Arabia (KSA) overtime from 68% in 1995 to 21% In2011. The number of patients on HD in Saudi Arabia has increased from 3737 patients in 1995 to 12116 patients in 2011 with an annual increase of 7.9%.
Aim: Use the pattern of prevalence change in to develop a mathematical model predicting the future prevalence of HCV infection among HD patients in Saudi Arabia in order to help health care delivery and resource allocation. Method: The yearly prevalence of HCV in HD from large epidemiologic studies and the Saudi council of organ transplantation from 1995 until 2011 were plotted in a graph. Least square simple regression was used to find the best prediction equation relating the percentage of HCV positive among the Hemodialysis patients. Figure 1 shows both the observed percentages and the fitted straight line. On the horizontal axis, the year code is 1 for the 1995, 2 for 1996, and 17 for the year 2011. The percentage of HCV positives denoted by Y is represented on the vertical axis. As a measure of goodness of fit of the model R2 =0.93, indicating excellent fit. (Figure 1) Result: The estimated regression equation is: Y= 71.942-3.033 X (year code). This equation may be used to obtain future predictions, a summary of which is shown in table 1: This mathematical model predicted a prevalence of 18.04% in 2012, very close to the actual prevalence reported last month for the same year of 18.7% Conclusion: This mathematical model predict the future prevalence with high precision, it predict that the prevalence will be as low as the prevalence in general population in year 2018. This will help in planning health care delivery and resource allocation. Prediction of future prevalence of HCV in HD in KSA* (the prevalence will equal to the prevalence in the general population, not zero

SAFETY OF RIGHT-LOBE LIVING DONOR LIVER TRANSPLANT FROM DONORS WITH GILBERT SYNDROME

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Introduction: Donor safety is the most important consideration of living donor liver transplantation evaluation. Some candidates with normal liver function test have isolated indirect hyperbilirubinemia related to Gilbert Syndrome. There is a debate on the use of living-liver donors with Gilbert syndrome. Case reports and small case series demonstrated safety of use of donors with Gilbert syndrome. Our aim is to review the donor safety of liver donation from Gilbert and the effect on the recipients.
Method: Between January 2001 and September 2014, two hundred and twenty two living-donor liver transplants using right-lobe grafts were performed in our hospital. Donors with Gilbert syndrome were defined as those whose serum bilirubin level was greater than 20.5 µmol/L (1.2 mg/dL). Fifteen of 222 (6.7%)right-lobe living-donor liver transplants (LDLT) were performed using donors with Gilbert syndrome, data on the age, gender, body mass index (BMI), total and direct bilirubin before donation, post-operative maximum bilirubin (PMB), total liver volume, percentage of remaining liver volume, donor and receipt outcome.
Results: The mean follow up period is 75 months (4-138), the mean age was 25 (18-32), all male, mean BMI was 23 (18-27), mean per-operative total bilirubin was 28 (18-34), mean per-operative direct bilirubin was 6 (1-10), mean PMB total was 85 (50-122), mean PMB direct was 23 (11-45), all has right lobe hepatectomy with a mean remaining volume of 36% (30-43). No mortality in the donors, one recipient died of hepatic artery thrombosis at post-operative day 7, all other recipients are alive. To our knowledge, this is world second largest series of right lobe liver donors with Gilbert syndrome.
Conclusion: Right lobe living donor liver transplantation from donor with Gilbert disease is safe for donors with excellent outcome in the recipients.

GILBERT'S SYNDROME AS A CAUSE OF UNCONJUGATED HYPERBILIRUBINEMIA AFTER LIVING DONOR LIVER TRANSPLANTATION

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Gilbert syndrome is an autosomal recessive condition manifest with no hemolytic unconjugated hyperbilirubinemia, with a prevalence of 3% to 8.6%. Mild hyperbilirubinemia episodes occur when individuals with Gilbert syndrome are exposed to physical stress, such as operative intervention or low energy intake. Liver transplantation has been safely performed using donors with Gilbert syndrome. After liver transplantation, Liver grafts from donors with Gilbert's syndrome can cause unconjugated hyperbilirubenemia. This may lead to unnecessary or invasive investigation unless properly identified.

Our aim to study if receipt of liver grafts from Gilbert's syndrome donors the effect of post liver transplantation will develop unconjugated hyperbilirubinemia Methods: Between January 2001 and December 2013, 423 living-donor liver transplants (LDLT) were performed in our hospital, of which 222 using right-lobe grafts and 201 using left later segment (LLS). Donors with Gilbert syndrome were defined as those whose serum bilirubin level was greater than 20.5 µmol/L (1.2 mg/dL) with conjugated bilirubin

Results: The mean follow up period is 75 months (4-138), the mean age was 41 (1-73), 17 male (81%), mean BMI was 23 (13-41), mean total bilirubin was 39 (24-198), mean direct bilirubin was 9 (3-24). One recipient died of hepatic artery thrombosis at post-operative day 7, another receipt with biliary stricture died after 3 years of HCV recurrence, all other recipients are alive. Of the 21 recipients, 14 (67%) has episodic or persistent unconjugated hyperbilirubinemia, (11 adults and 3 pediatrics), of the 11 adults recipients, 4 has isolated unconjugated hyperbilirubinemia, with normal ALT, AST and ALP, two of them has normal MRCP and liver biopsy, while 7 has elevation of ALT, AST or ALP were found to have either recurrent hepatitis C plus biliary stricture requiring intervention (4 patients), mild anastomotic stricture on MRCP causing minimal elevation of ALP with normal ALT (2 patients) or recurrent hepatitis C alone (1 patients). The 3 pediatric receipts that should Gilbert pattern have no evidence of biliary complication.

Conclusion: Living donor liver transplantation from donor with Gilbert disease can present with unconjugated hyperbilirubinemia the recipients, it should not prompt further testing or liver biopsy in absent of abnormal ALT, AST, and ALP.

Key words: Living-donor liver transplantation, Gilbert syndrome, unconjugated Hyperbilirubinemia

AGGRESSIVE RECURRENCE OF PRIMARY HEPATIC EPITHELIOID HAEMANGIOENDOTHELIOMA (HEHE) AFTER LIVER TRANSPLANTATION

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HEHE is a rare neoplasm of vascular origin that that occurs in the liver, UNOS reported a favorable outcome after liver transplantation in 110 patients with 1 and 5 years survival of 80% and 64% Case Report: A 40 year old lady with history of hypertension, presented with three month history of right upper abdominal pain with nausea, vomiting & significant loss of weight associated with scleral icterus and progressive abdominal distension. Examination revealed jaundice, hepatomegaly and ascites Serum bilirubin was 26.5 mg/dl, ALP was 552 Contrast Computed Tomography (CT) Abdomen and pelvic showed diffuse infiltrative neoplastic process of the liver with a mass effect and stretching of the hepatic and portal veins, in addition to bile duct dilatation. Viral hepatitis markers were negative and serum Alpha fetoprotein was within reference range. Liver biopsy was consistent with HEHE, with positive endothelial markers (CD31, CD34 & factor VIII-related antigen) she underwent living Related Liver transplantation on June 2013, and was discharged after 20 days with normal liver enzymes. The explanted liver weighed 3222 grams. Gross and microscopic pathology showed (fig1-7). Four month later, she presented with severe abdominal pain and ascites with elevated liver enzymes, CT showed numerous variable size non enhancing tumors associated with small amount of ascites. Hepatic veins, artery and portal vein are patent. Liver biopsy confirmed disease recurrence, she received supportive treatment and unfortunately she died 2 weeks later.
Conclusion: HEHE can have rapid and aggressive recurrence after liver transplantation.

KNOWLEDGE OF HEPATITIS C AMONG EGYPTIAN POPULATION

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Hepatitis C Virus (HCV) is a major public health problem in Egypt with an estimated 7.5 million Egyptian with chronic HCV; it is one of the leading causes of mortality due to the decompensated cirrhosis and hepatocellular carcinoma. Knowledge of the general population about HCV as a disease, mode of transmission and prevention was assessed as part of the Egypt Demographic and Health Survey (EDHS). Method: We reviewed the 2008 EDHS collected special health issues survey on the extent to which the men and women age 15-59 interviewed knew about hepatitis C and, among those who had heard about hepatitis C, their understanding of the modes of transmission and prevention of the virus, and the sources from which they had recently received information about hepatitis C. A nationwide representative sample of 12,008 individuals aged 15 – 59 representing the 28 governorates of Egypt, (52.4 % women and 47.6 % men) participated in the survey. Results: 85% of males and 80% of females were aware of hepatitis C virus. Among those who were aware of hepatitis C, 61 % of male and 67% of females received information about HCV within six month before the survey. The television was the main source of information for men and women (88% and 91% respectively) followed by personal contacts with the respondent's spouse, other relatives, friends, or neighbors (33%, 26%, respectively) and other media (18% and 14%) respectively. With regards of knowledge of the mode of transmission, 79% of males and 70% of females named at least one source of transmission, of those, the details is shown in table 1 There was no difference related to age, marital status or work status, but knowledge was more in urban areas, higher education and higher wealth.
Conclusion: Knowledge of the general population about HCV and the mode of transmission in Egypt (the highest prevalence of HCV in the world) are fair, but there is a need for public health education campaign about risk factor and prevention. Television and public media are good means of reaching and educating the public, there was no difference related to age, marital status or work status, but knowledge was more in urban areas, higher education and higher wealth.
Knowledge of the mode of transmission for both genders Transmission Male Female Blood transfusion 81% 85% Unclean needles 71% 69% Other contacts of blood of infected person 54% 40% Sexual relation with infected person 16% 18% Other casual physical contact 16% 22% .

LIVER TRANSPLANTATION FOR PROGRESSIVE FAMILIAL INTRAHEPATIC CHOLESTASIS TYPE 3 (MDR3 DISEASE) PRESENTING IN THE 5TH DECADE OF LIFE

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Background and Aims: Progressive familial intrahepatic cholestasis are rare heterogeneous group of autosomal-recessive disorders that presents during the neonatal period or within the first year of life resulting in intra-hepatic cholestasis during childhood. PFIC3, generally occurs later presenting either in late infancy, childhood, or even early adulthood (The Multiple Facets of ABCB4 (MDR3) Deficiency) Methods: Case Report: 44-year old gentleman with history of DM and jaundice since childhood due to Dubbin- Johnson syndrome without itching, he developed progressive jaundice and intractable itching associated with dark urine and pale stools, over the past 2 years, his total bilirubin was 563umol/L with high GGT and very high serum bile acid. Serology for viral hepatitis, autoimmune hepatitis, Wilson disease, alpha 1 antitrypsin and hemochromatosis were negative. Abdominal US showed no bile duct dilatation. MRCP showed Moderate splenomegaly without evidence of primary sclerosing cholangitis (PSC), liver biopsy showed Chronic liver disease (stage II/ IV) with doctoral proliferation, and Dubbin-Johnson syndrome He was started on hemodialysis for biopsy proven diabetic nephropathy 1 year ago. Results: Progressive familial intrahepatic cholestasis (PFIC3) was considered and liver biopsy stained negative for MDR3 by immunostaining and total absence of MRP2 (Dubbin Johnson protein), and genetic testing revealed a combination of Dubbin-Johnson mutations and MDR3 mutations. He received Living related liver transplantation from his daughter on September 16, 2014 and he has an excellent graft function, awaiting for kidney transplant.
Conclusions: PFIC 3 may present in adults leading to progressive liver disease requiring liver transplantation.

PLASMAPHARESIS INTRAVENOUS IMMUNOGLOBULIN AND RITUXIMAB SUCCESSFULLY TREAT RECURRENT PROGRESSIVE FAMILIAL INTRAHEPATIC CHOLESTASIS TYPE 2 AFTER LIVER TRANSPLANTATION

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Background: After liver transplantation, antibodies against BSEP receptors can form and bind BSEP receptors causing a picture similar to PFIC-2, this was first described in 2009. Since then, few cases of PFIC-2 recurrence was reported.
Methods: We present two cases with PFIC-2 recurrence after liver transplantation; a 14 years old boy and his 19 years old sister who had received cadaveric liver transplantation in the United States in 2011.
In January 2014 they presented with severe itching, high bilirubin, high AST/ALT and high serum bile acid. Virology, Autoimmune screen, Abdominal CT Scan and liver biopsy were negative. Initial liver biopsy on both patients were not conclusive but repeat biopsy of the 14 year-old boy on May 2014 showed recurrence of PFIC2, his anti-BSEP titer was 1: 1200, Treatment regimen for him started by 5 sessions of plasmapharesis every other day with an exchange volume of 1.5, followed by IV immunoglobulin (IVIG), followed by one dose of IV Rituximab 375/m2. His sister's liver biopsy showed PFIC2 recurrence. She started on the same treatment regimen.
Results: Currently, both patients improved clinically and biochemically and still on treatment plan.
Conclusions: PFIC-2 recurrence after liver transplantation occur through an antibody mediated rejection against BSEP receptors and can successfully be treated with plasmapharesis, IVIG and rituximab obviating the need for re-transplantation.

THE IMPACT OF HIGH PRE-TRANSPLANT MELD SCORE ON LIVE DONOR LIVER TRANSPLANT OUTCOME

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Background: Since the New York State Committee on Quality Improvement in Living Liver Donation prohibited live liver donation for potential recipients with Model for End-stage Liver Disease (MELD) scores greater than 25 back in 2002. There has been few studies evaluating the risk and complications of living donor liver transplant with High MELD >25, the western experience have shown that it does not increase mortality post-transplant while several Asian studies have shown increase 3 months mortality and complications Aim: To compare outcome of living donor liver transplant in patients with high MELD score versus those with low MELD and evaluate the impact on patient and graft survival. Methods: The charts of 160 adult live donor liver recipients from 2004-2012 were reviewed retrospectively and divided into 2 groups. Group A were patients who had MELD 25 Results: Of 160 live donor performed, Group A (MELD included 143 patients, and group B (MELD>25) had 17 patients in total. Out of the 17 patients transplanted in Group B, 6 have died since the transplant (35% mortality) and 3 of the 6 died within the 1st 6 months (2 of sepsis, 1 primary graft nonfiction requiring re-transplantation also died of sepsis). In Group A, 22 out of 143 patients transplanted with MELD died during the same period (15.4% mortality) Conclusion: In our cohort, there was more than two fold increase in mortality between the 2 groups with half the deaths occurring during the first 6 month due to sepsis. Live donor liver transplant for patients with high MELD score seems to carry an increased risk of sepsis and mortality post-transplant.

INFECTION CONTROL PROGRAM IS A KEY IN HEPATITIS C ERADICATION IN EGYPT

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Background: Egypt has the highest prevalence of hepatitis C (HCV) in the world due to past mass parenteral antischistosomal therapy. According to 2008 HCV national survey, the overall prevalence is decreasing compared to 1996 (figure 1), but there is an evidence of intense ongoing endemic transmission in Egypt due to poor adherence of infection control measures.
National committee for control of viral hepatitis put together a comprehensive program to control HCV, including surveillance, prevention and patient's management. Methods: The efficacy of the national committee for control of viral hepatitis in treating patients as well as the incidence of new patient annually were assessed to observe whether HCV control program is effective or not. The national committee established 23 viral hepatitis treatment centers throughout Egypt. There is full data for reenrollment and treatment of 220,000 HCV patients treated withpegulated interferon and ribavirin from2006-2012. The estimated annual incidence is 45,000 Results: Out of the 220,000 patients, the sustained viral response (SVR) rate was 54%, so 118,800 patients cleared the virus over seven year period(2006-2012), there is no data on the number of patients treated in non-governmental health care facility. It is estimated that 315,000 new cases infected (45,000 cases per year), So the rate new infections exceed the number of patients who achieve SVR Conclusion: HCV continue to be a major health problem in Egypt with inadequate current HCV control program Immediate change in the health care policy to develop strict nationwide infection control program involving all health care facilities focusing on education, certification, surveillance and reinforcement is the corner stone of any eradication program for HCV and is cost effective compared to treatment.

CADAVERIC VERSUS LIVING DONOR LIVER TRANSPLANT SURVIVAL IN RELATION TO MELD SCORE

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Introduction: MELD score (Model for End Stage Liver Disease) is universally used to priorities patients on the liver transplant waiting list. It is potentially used to predict survival as well.
There has been conflicting evidence on using living donor liver transplantation (LDLT) in patients with high MELD score. We herein showing a retrospective analysis of survival data in these two categories of patients and comparing survival between LDLT and Deceased Donor liver Transplantation (DDLT) in a single center experience. Patient & Method: We retrospectively reviewed our records from 2001 to April 2014 for LDLT and DDLT of KFSH. Date reviewed includes the number of patients for LDLT and DDLT, age, sex, MELD score and survival. Only Adults are included in this analysis. Patients were categorized into MELD score above and below 25. Kaplan Meier analysis was used for survival and log rank chi square test was used for comparison with p value of below .05 used for significance.
Results: Total number of transplanted patients at KFSH was 491. There were 222 patients for LDLT and 269 patients for DDLT. Age ranges between 15 and 80 with a median of 53.
For DDLT, there were 290 males and 201 females. The overall 1, 3 and 5 years Kaplan Meier survival of LDLT & DDLT is shown below: (table 1) When comparing the Kaplan Meier survival experience of the 2 groups (MELD above and below 25), there was no significance difference (Log-rank Chi-Square test, p-value= 0.177). There were also no significance difference in survival of the 2 groups of LDLT (p-value = 0.097) and DDLT (p-value=0.923) Conclusion: Our survival data indicates that there is not difference between the survivals of the two groups (DDLT vs LDLDT), nor that high meld score has a negative impact on survival. Larger cohort of patients may be needed to confirm these findings.

RECOVERY OF FULMINANT HEPATIC FAILURE AFTER GASTRIC BYPASS SURGERY

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Introduction: Fulminant hepatic failure (FHF) is a rare complication after gastric bypass surgery. The few cases reported either died or required liver transplantation. We report a 23 years old morbidly obese Saudi female (BMI 54) had gastric bypass surgery in April 2008 at a community hospital in an underserved area. The postoperative course was complicated by anastomotic leak and sepsis, requiring re-operation and antibiotics. Two month later, she developed jaundice (bilirubin 261.5 mole/L and high INR of 1.6). She was receiving vitamin supplements but no other medication. Viral serology for hepatitis A, B, C, autoimmune hepatitis, Wilson and A1AT were all negative, here BMI dropped to 41, Abdominal sonogram and MRCP showed marked hepatomegaly with no evidence of biliary dilation. A month later she was admitted to ICU at our facility with FHF, she received antibiotics for sepsis and high calorie enteral feeds. Liver biopsy showed diffuse severe liver fatty change (Fig. 1) The patient recovered after 6 weeks, but had repeated admission to the hospital for sepsis or ascites management, Bilirubin peaked to 993 but normalized completely after 8 month, the main therapy was high caloric diet to reduce rapid weight loss. Repeat imaging a year later showed marked decrease in liver size and repeat liver biopsy showed improvement of the previous fatty liver changes (Fig 2). Her current bilirubin is 8.9 mmol/L, BMI is 28. To our knowledge, this is the first case reported in the literature of FHF after gastric bypass recovering without liver transplant.

DECREASING HEPATITIS C PREVALENCE AMONG HEMODIALYSIS PATIENTS IN KINGDOM OF SAUDI ARABIA OVER THE PAST 3 DECADES

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Presenting Author: Hussein El-Siesy

Background: The prevalence of HCV in dialysis units is variable worldwide. The reported prevalence of HCV in HD patients in Kingdom of Saudi Arabia (KSA) is highly variable ranging between 15% and 80%. The number of patients on HD in Saudi Arabia have increased from 5706 patients in 1999 to 12116 patients in 2011 with an annual increase of 7.9%. Aim: To study the change in prevalence of HCV infection among HD patients in Saudi Arabia over the past three decades.
Method: We performed a retrospective analysis of local epidemiologic studies from 1995 as well as the Saudi Council of Organ Transplantation (SCOT) prospectively collected database for all HD patients in Saudi Arabia from 1999 until 2010.
Result: The first set of data represents a total of 5 studies published in 1995 involving 1950 patients. The reported prevalence was between 42-72% with average of 65.3%. In a large study in 2001, Souqiyyeh reported a prevalence of 50% among 6604 patients. SCOT reported a prevalence of 42% on the same year. SCOT data have shown a progressive decline in prevalence from 51% in 1999 to 24.5% in 2010. (Fig. 1).
Conclusion: Since 1995, there is a statistically significant decrease in prevalence of HCV infection among HD patients over the past 3decades (P\0.05). This decrease in prevalence is partially due to strict adherence to Infection Control Universal Precautions guidelines and using dedicated dialysis machines for infected patients with hepatitis C. This has resulted in much fewer hepatitis C virus seroconversions of all new comers to HD units in KSA, with slow decrease in the absolute number of HD patients with HCV (nominator) with progressive increase of total number of HD patients (denominator) resulted in progressive decline in HCV prevalence among HD patients.

LIVER BIOPSY AS REJECTION CRITERIA IN LIVING DONOR LIVER TRANSPLANT: ANALYSIS OF 94 CASES

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Background: The application of liver biopsy as one of the selection criteria in living donor liver transplantation (LDLT) is controversial.
In populations with high prevalence of liver disease and obesity, it seems logical to include liver biopsy as one of the donor selection criteria. The aim is to maximize the benefit to the recipient and minimize risk to the donor.
Aim: The aim is evaluate the rule of liver biopsy as rejection criteria for LDLT and to ascertain the safety of the procedure to the donor.
Methods: From March 2002 to May 2012, a total of 233 deceased donor liver transplants and 188 LDLT were performed at our institution. The number of potential donor worked up was 736. Potential living donors were worked up according to a step-wise evaluation protocol. Those with BMI [28 were excluded. The age of the worked up donors ranged from 18 to 50 years (mean = 28).
Results: a total of 548(74%) donors were rejected. Most were rejected at the initial stages of evaluation. In 82 donors (11%) the rejection was for complicated biliary anatomy. Other anatomical reason includes insufficient liver volume in 132(18%) and complicated vessel anatomy in 15(2%). Liver biopsy excluded 94 donors (13%). Significant macro vesicular statuses (fat more than 10%) was detected in 56 donors (60%) and was the main reason for rejection. Other causes include significant fibrotic changes in 15(16%), significant portal lymphocytic infiltrate in 13(14%), active hepatitis 3(3%), shistosomiasis in 3(3%) and other rare disorders in another 4(4%). There was no major complication from the procedure.
Conclusion: In our experience liver histology excluded 13% of the potential living donors. This percentage is significant and in our opinion justifies the procedure when complication rate is negligible.
We therefore recommend liver biopsy as part of the LDLT workup especially in the setting of high prevalence of liver disease.

THE IMPACT OF ANATOMICAL VARIATIONS AND INSUFFICIENT LIVER VOLUME ON LIVING LIVER DONATION

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Background and aims: Organ shortage has been the ongoing obstacle to expand liver transplantation world-wide including Saudi Arabia.
Living donor liver transplantation (LDLT) was hoped to improve this shortage. The aim of the present study was to analyze the impact of variant anatomy and insufficient liver volume on living donation.
Methods: From July 2007 to May 2012, a total of 147 deceased donor liver transplants and 139 LDLT were performed at our institution. 600 potential living donors were worked up according to a step-wise evaluation protocol. Those with BMI [28 were not worked up. The age of the worked up donors ranged from 18 to 50 years (mean = 28). They were all first or second degree relatives of the patients.
Results: Only 139(23%) donors were accepted for donation and 461(77%) were rejected. Some were excluded either at initial screening due to incompatible blood group, positive hepatitis serology, elevated liver enzymes. Others were rejected because of significant statuses, socioeconomic reasons or for reasons related to recipient's status. 78(13%) potential donors were rejected because of variations in biliary anatomy and 16(2%) others were rejected because of portal and hepatic vein anatomical variations. 106(18%) potential donors were rejected due to insufficient remnant volume(\30%) as determined by CT volume try, while 21(3.5%) were rejected because of graft to body weight ratio less than 0.8%.
Conclusion: There is no doubt that LDLT has helped in alleviating the severe shortage of deceased organs in Saudi Arabia. However suitable living donors are not easy to find especially with prevalent hepatic statuses. Over 35% of the potential donors were rejected because of either anatomical variations or inadequate liver volumes.
Our initial evaluation is effective in eliminating a large number of unsuitable donors. The donor evaluation process indeed remains to be a large burden on the resources of our program.

HEPATITIS B PROPHYLAXIS POST LIVER TRANSPLANTATION WITH TENOFOVIR OR ENTECAVIR

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Background: HBIG and lamivudine has been the most commonly used prophylaxis for HBV post liver transplant, decreasing the recurrence rate from 90% to less than 10%. Both endeavor and tenofovir are potent and reported as a rescue therapy to control HBV post liver transplant.
Our aim is to evaluate the safety and efficacy of endeavor and tenofovir in the post liver transplant setting.
Method: Out of 133 liver transplants performed for HBV, 15 patients received endeavor (5) or tenofovir (10) post liver transplant, demographic and clinical data was collected. We evaluated HBV recurrence (reappearance of HBsAg or HBV DNA), as well as interaction with immunosuppression (rate of rejection) or renal impairment.
Results: Total of 15 patients, 10 males, mean age of 51 (34-64), with mean follow up of 32 month (12-114 month), average MELD of 22(12- 40), All were positive for HBsAg, HBcAb and 13 were HBeAg negative, HBVDNAwas undetectable in 9 at the time of transplant and positive in 6 (2 with high vermeil), 5 patients has HCV and 6 patients has HDV.
With regards of HBV treatment before transplant, 3 patients received lamivudine, 3 combined adenoviral and lamivudine, 6 tenofovir and 3 endeavor, 5 patients has HCC within Milan criteria, 10 patients received cadaveric liver transplant while 5 has LDLT, all patients received HBIG for 12-16 month Three out of the 15 patients had HBsAg after liver transplant with only one patient having positive HBV DNA who was on adenoviral post-transplant, and vermeil was controlled after switching to endeavor. No worsening of renal function related to tenofovir.
Conclusion: Tenofovir and Entecavir are safe and effective in prophylaxis of post liver transplant with high resistance barrier, no effect on renal function or interaction with immunosuppression. It may provide an attractive alternative to long term HBIG use.

SUCCESSFUL THROMBOLYTIC THERAPY IN A PATIENT WITH BUDD-CHIARI SYNDROME

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Introduction: Management of Budd-Chari syndrome (BCS) include different interventions and surgical procedures, there are limited data about the role of local thrombolysis in treating this condition, but appeared to be helpful in the case illustrated below.
Case report: A 29 year-old lady referred with one month history of right upper abdominal pain, progressive abdominal distension and intermittent fever, not associated with rigors. No history of oral contraceptive use. She has mild right upper quadrant tenderness and abdominal distention with moderate elevation of liver enzymes, negative serology for viral hepatitis, autoimmune or cholesteric liver disease. Computed tomography (CT) angiogram of the abdomen showed large amount of ascites with extensive thrombosis of the inferior vena cava (IVC) involving the hepatic and left renal veins with complete occlusion of the left common iliac vein confirmed by venogram.
Images 1 and 2.
Infusion catheter was placed through the thrombosis segment of IVC and right hepatic artery. Thrombolytic therapy was started with injection of 5 mg of recombinant tissue plasminogen activator (t-PA) as a loading dose, followed by 0.3 mg per hour. Enoxaparin followed by starting oral warfarin indefinitely. Ascites was well controlled with diuretics and large-volume paracentesis.
Follow up venogram showed partial recanalization of IVC and hepatic veins. A repeat CT scan after 14 weeks showed complete resolution of the thrombus.
After 28 months follow up, she is currently asymptomatic with normal liver function tests and total resolution of the ascites.
Conclusion: Even though the data on local thrombolysis is limited and the agents and doses are not uniform among reported cases, it can be considered in acute BCS with partial obstruction, followed by angioplasty or TIPS if unsuccessful.

CHANGING TREND OF INDICATION FOR LIVER TRANSPLANTATION FOR HEPATITIS B FROM DECOMPENSATION TO HEPATOCELLULAR CARCINOM

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Background: The indication for liver transplantation for hepatitis B (HBV) infected patients are hepatic de-compensation, fulminant liver failure or development of hepatocellular carcinoma. Currently, adequate control of viral replication can be achieved with potent antiviral therapy. We suggest that with better control of viral replication using potent medication (endeavor and tenofovir) compensation, but now with control of viral replication, less decompensation and more hepatocellular carcinoma (HCC) is the reason for liver transplantation.
Method: We retrospectively reviewed 133 liver transplantation performed for HBV from 1990 till 2012 at our institution. We divided them into two eras, the first era from 1990 till 2006 and the second era from 2007 till 2012, we looked at the number of HCC in each group and the hepatic de-compensation among HCC patients.
Result: Among 133 patients transplanted for HBV, 43 patients has HCC (32.3%), 66 patients were transplanted between 1990 to 2006 of which 18 patients has HCC (27%), hepatic de-compensation was seen in 60 out of 66 patients in this group with only one third of the HCC group being transplanted for MELD exception without de-compensation. While 67 were transplanted between of 2007 to 2012 of which 26 patients has HCC (39.4%), hepatic compensation was seen in 48 out of 66, 73% of patients with HCC transplanted with MELD exception without de-compensation. In our cohort there was 40% overall increase in transplantation for HCC from the first era to the second with more than 4 fold increase in HCC cases without de-compensation done with MELD exception.
Conclusion: Due to use of highly potent antivirals against hepatitis B (tenofovir or endeavor) with sustained viral suppression, there is a changing trend of indication for liver transplantation for Hepatitis B from hepatic decompensation to hepatocellular carcinoma.

MONOCYTE CHEMOATTRACTANT PROTIEN-1 IN TYPE 2 DIABETIC PATIENTS WITH DIABETIC NEPHROPATHY

Authors: Reem El-Mahdi
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Diabetic nephropathy (DN) is the major cause of end-stage renal disease, and affects a substantial proportion (20-40%) of patients with type 2 diabetes.
This disease is characterized by morphological, biochemical and functional alterations within the kidney such as glomerular membrane thickening, meningeal matrix expansion, micro-vascular changes, arteriolar halitosis and tubular degeneration.
Hyperglycemia is known to be implicated in the development of the above-mentioned degenerative changes because the hyperglycemic state is associated with the accumulation of inflammatory cells and upregulated expression of proinflammatory mediators such as monocyte chemoattractant protein-1 (MCP-1) which is likely to play a major role in the pathogenesis of the changes that occur in DN.
Monocyte chemoattractant protein-1 (MCP-1) is a chemokine that exhibits most potent chemotactic activity toward monocytes. It can increase adhesion molecule expression on monocytes and produce superoxide anions.
MCP-1 is considered as a noninvasive urinary biomarker to detect either morphological or biochemical changes in DN.
It is suggested to be implicated in the development and progression of diabetic nephropathy by playing a role in infiltration of monocyte/macrophage. Recent studies have demonstrated that urinary monocyte chemoattractant protein-1 (uMCP-1) is different at different stages of diabetic nephropathy.
A strong up regulation of MCP-1 was observed in tubular cells in biopsy specimens from patients with type 2diabetes and overt nephropathy. Urinary MCP-1 levels were found significantly elevated in patients with diabetic nephritic syndrome. An in vitro study showed that MCP-1 directly increased extracellular matrix (ECM) protein, and therefore may contribute to ECM accumulation in diabetic nephropathy.

VALIDITY OF COMPREHENSIVE PREOPERATIVE EVALUATION FOR LIVER TRANSPLANTATION

Authors: Prof: Amr M Yassin
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Presenting Author: Prof: Amr M. Yassin

Living donor liver transplantation is a solid practice now in Egypt. In absence of international consensus or solid proof guidelines, preoperative evaluation for both donors and recipients is the job of each transplant center.
Anesthetists plays a central role in the process of preoperative evaluation and life changing decisions have to be made daily by the transplant anesthetist.
The validity of the comprehensive preoperative evaluation workup need to be checked in consideration with the positive data elaborated and the magnitude of such workup on patient's enrollment for transplantation as well as patient's outcome.

TEARLY HEPATOCELLULAR CARCINOMA ASSOCIATED WITH FIBROCYSTIC LIVER DISEASE IN A 10 YEARS OLD CHILD --A CASE REPORT.

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Presenting Author: Kishwer Kumar

Background: Fibrocystic liver–kidney disease is caused by a group of rare and genetically diverse disorders that are associated with kidney cysts or dysplasia and ductal palate malformation in the liver. There have been several reports of liver neoplasia's arising in hepatobiliary fibrocystic diseases. However, most of them were cholingiocarcinomas and cases involving hepatocellular carcinoma (HCC) are rare and all reported cases are related with adults.
Case Report: A 10 years old girl with history of repeated gastrointestinal bleeding underwent multiple times for banding and sclerotherapy and also had history of Porto systemic shunt without any significant benefit referred to us as a case of Fibrocystic liver disease with decompensated liver disease for Liver Transplantation. Child underwent Living donor liver transplantation, the explanted liver showed.
Gross pathology Explant liver weighed 838 g and measuring 21 x 13 x 8.5 cm with attached gallbladder measuring 7 x 3 x 0.2 cm (in wall thickness). The external surface is covered by multiple white nodules ranging in size from 0.4 to 1 cm.
Serial slicing reveals an ill-defined yellow soft lesion (4 x 2.5 x 2.5 cm) localized in the sub capsular area of the left lobe (segment 4). The rest of the cut surface is green and nodular (cirrhotic).
Histopathology Microscopy from largest nodule consistent with early hepatocellular carcinoma.
The rest of liver is cirrhotic the morphology consistent with fibrocystic disease of liver.
Conclusion: To our knowledge, this is the first reported case of Hepatocellular carcinoma associated with fibrocystic liver disease in pediatric age group.

LIVER TRANSPLANTATION FOR PROGRESSIVE FAMILIAL INTRAHEPATIC CHOLESTASIS TYPE 3 (PFIC-3) PRESENTING IN THE 5TH DECADE OF LIFE

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Presenting Author: Kishwer Kumar

Background: PFIC a rare heterogeneous group of autosomal-recessive disorders that presents during the neonatal period or within the first year of life. PFIC3 generally occurs later presenting either in late infancy, childhood, or even early adulthood.
Case Report: 44-year old gentleman with history of DM and jaundice since childhood due to Dubbin- Johnson syndrome without itching, he developed progressive jaundice and intractable itching associated with dark urine and pale stools, over the past 2 years, his total bilirubin was 563umol/L with high GGT. Serology for viral hepatitis, autoimmune hepatitis, Wilson, alpha 1 antitrypsin and hemochromatosis were negative. Abdominal US showed no bile duct dilatation. MRCP showed Moderate splenomegaly without evidence of primary sclerosing cholangitis (PSC), liver biopsy showed Chronic liver disease (stage II/ IV) with finding suggestive of small duct PSC, and Dubbin-Johnson syndrome He was started on hemodialysis for biopsy proven diabetic nephropathy 1 year ago. Progressive familial intrahepatic cholestasis (PFIC) was considered and liver biopsy stained negative for MDR3, and genetic testing using 3rd generation sequencing revealed a combination of Dubbin-Johnson mutations and PFIC-3 mutations, this was confirmed using PCR technique. He received Living donor liver transplantation from his daughter on September 16, 2014 and he has an excellent graft function, awaiting living related kidney transplant in 1 week.
Conclusion: To our knowledge, this is the first reported case of liver transplantation for pathologically and genetically confirmed PFIC-3 presenting in the fifth decade of life.

DE NOVO AUTOIMMUNE HEPATITIS IN FIRST HIGH VOLUME PEDIATRIC LIVER TRANSPLANTATION PROGRAM IN SAUDI ARABIA

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The development of de novo autoimmune hepatitis (AIH) after liver transplantation (LT) has been described in both pediatric and adult populations. Unlike classic AIH, this condition does not have defined diagnostic criteria and is diagnosed mainly by the exclusion of other conditions.
Material and Methods: Between January 2011 and December 2014, 156 pediatric liver transplants were performed at King Faisal Specialist Hospital and Research Centre, the first high volume pediatric liver transplant program in Saudi Arabia. Mostly from Living donors (n=145, 92.9%). Seven percent of transplants were performed from deceased donors (n=11).
The patient's charts reviewed for possible causes or association, duration, and outcome. As per protocol we used to do autoimmune screen (ANA, ASMA, LKM and serum immunoglobulin twice per year for all patients) .As observed by others Autoantibodies are frequently detected after liver transplantation (LT), but their role is unclear.
Results: Five cases were identified (3.2%). They were transplanted for Biliary Atresia (n=3), Urea cycle defect (n=1) and Criglar najjar Syndrome (n=1), presented with the features of acute hepatitis in otherwise stable transplant recipients. All have positive autoimmune workup and positive histopathological findings without significant correlation of their serum immunoglobulin level which is usually the case in De Novo (AIH) Four of them were associated with biliary stricture either at time of diagnosis or shortly after. All patients were successfully treated with steroids, Azathioprine and low dose of tacrolimus to keep level (2-4 ng/ml).
Conclusions: We are reporting that even with differ indications for liver transplantation (LT) and being purely living related donor (LRD) program still the incidence of de novo AIH is low and does not impact on long-term survival .Keeping in mind that Familial and metabolic cases are the major indications for liver transplantations in our Centre and the high percentage of De Novo (AIH) in biliary atresia cases (75%) strongly support that more studies need to look for the pathophysiology of biliary atresia as an autoimmune disease !

TRANS ESOPHAGEAL ECHOCARDIOGRAPHY: IS IT A REAL ADDITION TO LIVER TRANSPLANTATION

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Tran's esophageal echocardiography: Is it a real addition to liver transplantation Orthotropic liver transplantation (OLT) induces severe stresses on the cardiovascular system. Several hemodynamic tools either static or dynamic fluid indices can be used. In orthotropic liver transplantation (OLT), multiple case reports have described the usefulness of TEE in the evaluation of hemodynamically unstable patients, with findings including intracardiac thrombus, pulmonary embolus, cardiac tamponed, and obstructive cardiomyopathy that were not diagnosed with other intraoperative monitors. Studies of TEE in OLT have shown improved monitoring of volume status and myocardial function, with significant changes in therapy resulting from TEE findings, leading to the suggestion that TEE use is both safe and helpful during OLT. In this lecture we will illustrate our experience in TEE in our program.

EARLY GRAFT FUNCTION AFTER LIVER TRANSPLANTATION, ANESTHETIST ROLE.

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In liver transplantation, Maintaining normal graft function stands as primary goal for transplant procedure. Multiple factors affect graft function and survival including preoperative volume try and graft weight/recipient weight ratio, the histologic characteristics of the grafted liver, the ischemia time, vascular and anatomical issues, ischemia reperfusion injury, and others.
In this presentation; we will try to highlight practices that can be used by anesthetists either during transplantation or afterwards in ICU to prevent graft injury, maintain and promote graft function

IMMUNOSUPPRESSANT-DRUG INTERACTIONS IN LIVER TRANSPLANT, ICU PERSPECTIVE

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Presenting Author: Mohamed El-Morshedi

Orthotropic liver transplant remains the only curative treatment for end-stage liver disease. Immune suppression is a cornerstone in preserving the graft function. However, drugs used in immune suppression have many drug interactions with some commonly used medications in the ICU, some of which may be serious. Awareness of these drug interactions can greatly help in avoidance of many complications, consequently improving outcome.

EFFICASY AND SAFETY OF ENTECAVIR IN A COHORT OF HBV INFECTED SAUDI PATIENTS

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Entecavir was found to be very efficacious in multiple randomized clinical trials and real life studies from the eastern and western worlds for treatment of HBV. No large scale studies from Middle East Region on endeavor and particularly Saudi Arabia where genotype D is the predominant Genotype.
Aims: To assess the efficacy and safety of endeavor (Barnacled) in a cohort of HBV infected patients in a single tertiary center in Saudi Arabia.
Methods: Retrospective chart review of HBV infected patients, both eAg positive and eAg negative, cirrhotic and non-cirrhotic, treatment Naive or exposed to other antiviral agents. Patients were included if they had pretreatment quantitative HBV DNA and completed at least 6 months of follow up. Patient were excluded if they have coexisting causes of chronic liver disease. Those found to have fatty changes on US without histological evidence of non-alcoholic steatohepatitis were included. Demographic, biochemical, serological, radiological and histological data were collected and analyses using SPSS. The primary outcome was suppression of HBV DNA to undetectable level.
Results: From July 2008 till Sept 2014, 324 patients with chronic HBV on entecavir were included. Mean age was 45.0±14.4 years and 71.5% were males. The median follow up was 30.5 months (range 6-71 months). EAg was positive in 71.8% and 14.2% were cirrhotic at the time of diagnosis. Seventy one percent of patient were naive to HBV treatment while 29% had been exposed to at least one anti-HBV agent. Diabetes mellitus, Hypertension and dyslipidemia were the most common morbidities in these patients accounting for 26.1, 23.6 and 21.2% respectively. Fibrosis assessment was available for 209 patients. Of these, 44.5% had advanced fibrosis (stage 3 &4) at initial assessment. The median HBV DNA log for those with detectable DNA was 4.9 (range 1.2-9) while 10% had undetectable DNA as they were on other antiviral treatment. At last contact with patients, undetectable DNA was found in 88% of the patients. SAg sero-conversion occurred in 2.4%. Male gender, lower BMI, ALT normalization and absence of eAg were associated with DNA undetectability. All patients tolerated the treatment well and none had serious side effects or treatment discontinuation.
Conclusion: Entecavir is very effective in suppressing HBV and was well tolerated in Saudi HBV infected patients however the rate of sAg seroconversion was very low.

EFFECT OF DEXMEDETOMIDINE ON HEPATIC ISCHEMIA REPERFUSION INJURY IN THE SETTING OF ADULT LIVING DONOR LIVER TRANSPLANTATION

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Presenting Author: Nirmeen Fayed

Aim: investigate clinically the hypothesis that intraoperative infusion of dexmedetomidine can exert a protective effect against hepatic ischemia reperfusion injury (IRI).
Methods: 40 adult recipients of living donor liver transplantation (LDLTx), were prospectively randomized into; group I (n = 20) received placebo and group II (n=20) received continuous intraoperative infusion of 0.8 µg.kg-1h-1 of dexmedetomidine.
Measurements: AST, ALT, bilirubin, INR and lactate, at base line, just postoperative, and on postoperative days (PODs) 1, 3, and 5. Intercellular adhesion molecule-1 (ICAM-1) at; base line, 2 and 6 hours after reperfusion and POD1. At the end of the surgery, a liver biopsy was sent for hitopathological assessment.
Results: both groups were comparable regarding MELD score, base line; AST, ALT, bilirubin, INR and lactate, cold and warm ischemia times, and graft body weight ratio. Group II showed significantly attenuated levels of ICAM-1 and minimal histopathological changes and significantly lower AST, ALT, bilirubin, INR, and lactate. Clinically the duration of postoperative mechanical ventilation was significantly less while the ICU stay tended to be less but non-significant in group II.
Conclusions: Dexmedetomidine might exert protective effects against IRI during LDLTx as indicated by suppression of ICAM-1, better histopathological scores and improved post-operative liver function.

BLOOD TRANSFUSION DURING LIVER TRANSPLANT, THE RIGHT COMPONENT AT THE RIGHT TIME TO THE RIGHT PATIENT

Authors: Nirmeen A. Fayed
Affiliation: MD
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Background: In spite of improving surgical and anesthetic techniques, LTx still carries the risk of excessive bleeding. Blood transfusion to compensate for bleeding and to correct coagulation disturbances is linked to increased morbidity and mortality. Moreover, it can paradoxically either exacerbate bleeding or promote thrombosis if an inappropriate component is given to a poorly selected patient at a wrong time. Aim: to highlight three key questions; 1st what is the appropriate component? How long can be stored? Should this component be irradiated? What is the dose? 2nd when to give blood? Should we follow therapeutic or prophylactic policy, liberal or restrictive strategy, according to conventional coagulation tests or the point of care monitoring? 3rd which patients? Have they risk for bleeding or thrombosis, does they refuse blood transfusion? Are they recipients for living or deceased donor LTx? Conclusion: Transfusion practice during LTx should be tailored individually according to the patient clinical presentation. Blood products have to be selected carefully, the same blood product which can prevent bleeding in one patient can promote bleeding or thrombosis in others. The patient clinical condition and not the laboratory results or the thromboelasto (metry/ graphy) is the target of coagulation optimization.

STUDY OF FACTORS CONTRIBUTING TO PERSISTENT THROMBOCYTOPENIA FOLLOWING LIVER TRANSPLANTATION

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Presenting Author: Maha Hussein

Thrombocytopenia is one of the common features of advanced liver cirrhosis. Liver transplantation is the only treatment for end stage liver disease, but even after transplantation thrombocytopenia is frequent. The aim of this study was to monitor platelets count and to identify factors contributing to persistence of thrombocytopenia following liver transplantation. The study included 36 patients who underwent LDLT in Ain Shams Center of Organ Transplantation (ASCOT) in one year (2013). Preoperative platelet count was recorded. Following transplantation, platelets count was recorded daily for the first two weeks, then at one month, 3 months, 6 months and 12 months. Splenic size and portal venous blood flow were measured at the same intervals by Doppler ultrasound. Thrombopoietin was measured before surgery then at 2 weeks and 6 months following transplantation. Persistent thrombocytopenia was defined as a platelet count less than 150 x 109/L at one year post-transplantation. At the end of the study, 56% of patients had persistent thrombocytopenia at 1 year. Factors that showed significant correlation with persistent thrombocytopenia were lower preoperative platelet count, lower preoperative portal vein flow velocity, greater preoperative spleen size, higher GRWR and longer operative time. Highest sensitivity was found for preoperative portal flow velocity and highest specificity was to GRWR. HCV recurrence, rejection episodes, CMV infection, biliary and vascular complications post-operative were not independent factors for persistent thrombocytopenia.

LDLT JORDAN HOSPITAL EXPERIENCE

Authors: Dr. Abdallah Al-Bashir, Dr. Anwar Jarrad, Dr. Saeb Hammoudi, Dr. Muaweiha Ababneh, Dr. Mahmoud Khatab
Affiliation: Jordan Hospital
Presenting Author: Dr. Saeb Hammoudi

Jordan Hospital and Medical center experience with 96 cases of LDLT over a period of ten years from September 2004 until March 2015 will be presented.
The demographic data, presentation, classification of the disease, complications and outcome will be discussed.

FAST TRACKING IN LIVER TRANSPLANT, IMMEDIATE POSTOPERATIVE TRACHEAL EXTUBATION

Authors: Dr. MO Ababneh, Dr. R Shihab
Affiliation: Jordan Hospital
Presenting Author: Dr. MO Ababneh

Fast Tracking in Liver Transplantation: Immediate Postoperative Tracheal Extubation: Feasibility and Clinical Impact M O Ababneh, FRCA R. Shehab, JBA • Increased survival rates after orthotropic Liver Transplantation (OLT) in patients with end-stage liver disease have become possible due to standardization of surgical techniques and advances in anesthetic management among other factors.
Early intubation has proved to be feasible and safe in these patients, but the outcomes are still uncertain.
Early intubation in liver transplant recipients was reported in the 1990s.
At present, early intubation after liver transplantation has been successful in many patients and is gradually being adopted in more and more hospitals.
The up-to-date concept of improving patient outcome following OLT includes a Fast Track (FT) approach in selected patient populations, which may shorten ICU and/or hospital stay and reduce costs.
Immediate postoperative estuation has been identified as an excellent tool to achieve both improved clinical results and a reduced drain on financial resources.
FT protocols have shown that prolonged mechanical ventilation following surgery is NO longer justified in the majority of patients.
The evidence at least 70–80% of transplant recipients can be intubated immediately following surgery.
The incidence of intubation is not increased when compared to patient's intubated later.
However, special attention should be focused on liver transplant recipients in poor clinical condition at the time of OLT.
These patients might NOT be eligible for fast tracking protocols and may be at increased risk of prolonged postoperative mechanical ventilation.

PREDICTORS OF RECURRENCE OF PRIMARY SCLEROSING CHOLANGITIS AFTER LIVER TRANSPLANTATION: A SINGLE-CENTER EXPERIENCE OVER 20 YEARS

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Liver transplantation (LT) is the only therapeutic option for primary sclerosing cholangitis (PSC), however, recurrence of PSC (RPSC) post-LT occurs at rates ranging from 9-47%. In this study, we aimed to define risk factors for rPSC post-LT and evaluate the impact of early recurrence (in the first 2 years post-LT) on patient survival.

A total of 101 liver transplants were done for 94 patients diagnosed with PSC over a period of 20 years at University of Alberta Hospital. The Kaplan-Meier curve was used to calculate survival and Cox's proportional regression hazard model was used to identify risk factors. A P-value of Age of patients at time of transplant ranged from 6 to 72 years old with a mean of 41 years. Liver grafts were obtained from deceased-donors in 82 transplants and from live-donors in 19 transplants. The overall patient survival was 81% during the follow-up period; survival at 1 year was 95%, at 5 years was 89% and at 10 years was 85%. RPSC occurred in 42 patients and overall recurrence free survival was 56%. The overall graft survival was 76%; graft survival at 1 year was 89%, at 5 years was 83% and at 10 years was 78%. Univariate analysis revealed that younger recipient age at time of transplant, previous biliary surgery, low serum albumin, positive cross-match, and older donor age are potential predictors of recurrence. Multivariate analysis revealed that positive cross-match (HR= 3.316, 95% CI (1.021-10.772)), and donor age (HR=1.043 (1.005-1.082)) are independent predictors of PSC recurrence. Early recurrence did not affect patient survival (P =0.972).

In conclusion, LT remains the best management for end-stage PSC. Positive cross-match and older liver grafts are predictors of rPSC post-LT and early recurrence of PSC does not affect patient survival.

OUTCOME OF INCIDENTALLY-DISCOVERED HEPATOCELLULAR CARCINOMA AFTER LIVER TRANSPLANTATION

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Background: With recent improvements in imaging, the frequency of incidental HCC (IHCC) appears to be declining.
Objectives: As such, we aimed in this study to assess IHCC over different time periods, and to compare impact on outcome to pre-operatively diagnosed HCC (PDHCC) and non-HCC liver transplants Patients and methods: We analyzed the outcome of adult patients who were transplanted in our institution and had at least one year of follow-up. Patients were divided into three groups according to diagnosis of HCC.
Results: Between 1990 and 2010, 887 adults (>18 year old) were transplanted. Among them, 121 patients (13.6%) had PDHCC and 32 patients (3.6%) had IHCC; frequency of IHCC decreased markedly over years, in parallel with significant increase in PDHCC. Dividing patients into 5-year intervals, between 1990 and 1995, 120 patients had liver transplants, 4 (3.3%) of them had IHCC and only 3 (2.5%) had PDHCC while in the last 5 years, 263 patients were transplanted, 7 (0.03%) of them had IHCC and 66 (25.1%) had PDHCC (PPatients with IHCC had no recurrences after transplant while PDHCC patients experienced 17 recurrences (15.3%) (P=0.016).
Conclusions: Incidental HCC has significantly decreased despite steady increase in number of transplants for HCC. Patients with IHCC had excellent outcomes with no tumor recurrence, and survival comparable to PDHCC. Number of HCC lesions should not be used alone for excluding patients from transplantation, as it may exclude patients with favorable outcome.

IMPACT OF STEROID-FREE IMMUNOSUPPRESSION ON THE OUTCOME OF LIVER TRANSPLANT IN A SINGLE CENTER OVER 10-YEAR PERIOD: INTENTION-TO-TREAT ANALYSIS

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Corticosteroids remain a cornerstone for many immunosuppressive regimens. They have well-known side effects that explain the policy of minimizing their use by many transplant centers.
In our center, immunosuppression regimen is based on induction using anti-CD 25 monoclonal antibody and maintenance using calcineurin inhibitors and mycofenolate moefetil. As steroids are not used on a routine basis, we tried to analyze results of our steroid-free regimen based on intention-to-treat analysis.
This study included adult patients (>18 year old) who had solitary primary liver transplantation due to end-stage liver disease between 2000 and 2010 with a follow-up period of at least 2 years after transplant.
Outcome endpoints included graft and patient survival, rejection and switching to steroid therapy, infectious complications, post-transplant diabetes and hypertension.
A total of 568 patients fulfilled the criteria and the median time of follow-up was 5.3 years. Mean age was 51.9 ± 9.9 year old, and 385 (67.8%) patients were males. Mean model for end-stage liver disease score was 19.7 ± 9.9 and 296 (52.1%) patients were transplanted from home. Out of 568 patients included in this study, 292 (51.3%) patients did not receive steroids, 73 (12.8%) patients were already on steroids before transplant, 145 (25.5%) patients had steroids for more than 3 months, and 58 (10.4%) patients had used steroids for less than 3 months.
Graft survival at 5 and 10 years post-transplant was 73.6%, and 62.9%, respectively while patient survival at 5 and 10 years was 76% and 64.6%, respectively. There was no difference between the 4 groups of patients regarding graft loss or patient death.
A total of 178 (31.3%) patients had at least one attack of rejection while 390 (68.7%) patients did not experience any rejection during the follow up period. Ductopenic rejection was reported in 9 patients (1.6%). Viral and bacterial infections in the first 3 months post-transplant, post-transplant diabetes and hypertension were significantly higher in patients who used steroids.
In conclusions, steroids can be used selectively after liver transplant with no adverse impact on graft or patient survival and no higher risk of rejection in addition to avoidance of unnecessary steroid-related complications.

EXPLORING PORTAL VEIN HEMODYNAMIC VELOCITIES AS A PROMISING ATTRACTIVE HORIZON FOR SFSS PREDICTION POST-LDLT, AN EGYPTIAN CENTRE STUDY

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Background: Liver transplantation is the only definite treatment for patients with irreversible liver failure. This study try to explore portal vein hemodynamic velocities in the early post-operative period after LDLT and determine the mean intra and post-operative portal vein velocities that may increase small for size syndrome (SFSS) risk.
Patients & Methods: The study was done on 123 adult cirrhotic patients who underwent LDLT at Al-Kasr Al-Ainy Hospital. Patients were submitted to full history, examination, pre-transplantation labs and imaging.Intraoperative Doppler ultrasound (IOUS) studies at the portal vein, hepatic veins and hepatic artery were performed following graft reperfusion. PO Doppler US was performed once a day over the first 2 weeks. Complete graft functions were obtained daily for all patients.
Results: PVV (portal vein velocities) declined gradually but significantly post-LT. PO (post-operative) PVV were higher in early mortality group. IO and PO PVV were significantly higher in SFSS group. The best cutoff value for prediction of SFSS using IO pre & at & post-anastomotic PVV were 55.5, 106, and 126.5 cm/sec respectively and for PO pre & post anastomotic 48.6, 71.1 cm/sec respectively. There was significant positive correlation between PO mean PVV & and mean ALT, total bilirubin and INR
Conclusion: IO & PO PVV are significant hemodynamic factors that influence the functional status of the transplanted liver. SFSS which has a negative impact post-LDLT, could be predicted by cut-off values for the IO and PO PVV.

PROCALCITONIN IN DIAGNOSIS OF INFECTION IN PATIENTS WITH LIVER CIRRHOSIS AND POST LIVER TRANSPLANT PATIENTS

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Poster not data show (technical error) Background: Bacterial infections are a major cause of morbidity and mortality among patients with liver cirrhosis. Procalcitonin (PCT) is a prohormone that has been used as a marker for the diagnosis of bacterial infections. It may have a role in infections related to liver cirrhosis.
Objectives: The study aims to evaluate the role of Procalcitonin as a marker of infection in patients with liver cirrhosis.
Methods: Plasma level of Procalcitonin was measured 75 patients (40 liver cirrhosis patients with infections,20 liver cirrhosis patients without infections,8 post-liver transplant patients with infection and 7 post-liver transplant patients without infections) compared to 15 healthy control subjects.
Conclusion: We found that the diagnostic accuracy of procalcitonin is more superior to C-reactive protein measurement in patients with all causes of liver cirrhosis.
Key words: Cirrhosis; Infection; Procalcitonin; post-transplant; liver.

THE ART OF IMMUNSUPPRESSION

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Effective immunosuppression in transplantation relies on preventing the immune system from rejecting the allograft while preserving immunologic control to combat infection and neoplasia.
Among the many immunosuppressive available at the hand of the transplant physician nowadays, and also many protocols; there is neither an optimal drug(s) nor optimal protocol.
The issue is more complicated especially in liver transplantation. Although the liver is an immune privileged organ (lower rate of rejection despite less immunosuppression); the presence of other individual factors e.g. HCV, HCC, AIU and renal failure (HRS) make the issue more complicated. Moreover, the presence of different metabolic problems such as diabetes, metabolic syndrome and ischemic heart disease (pretransplant or de novo) further complicate the issue (studies in Kasr Al-Ainy unit of liver transplantation). Therefore, it is individualized (not optimal) immunosuppression. This is why it is considered an art.
Agenda: The liver as an immune privileged organ. (Compared to other solid organ transplantation).Short revision of the classes of immunosuppressive.
Individualized versus optimal immunosuppression in liver transplantation. (Studies…) "Bottom up" versus classic protocols. (Studies…) Tolerance in liver transplantation.
The future (substances in the pipeline, tolerance promoting therapeutic protocols…).

OUTCOME OF LIVING DONOR LIVER TRANSPLANT RECIPIENTS IN UNIVERSITY HOSPITAL: MEDICAL PERSPECTIVES AFTER 10 YEARS EXPERIENCE

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Introduction: despite liver transplant success, medical problems and diseases recurrence are frequently encountered. Aim: retrospective evaluation of medical outcome of ALDLT. Methods: Out of 162 patients transplanted between April 2004- July 2015, 120 patients evaluated for medical complications. Results: Male/female: 110/10, age: 48.8, indications: (HCV = 111 HBV= 1, Cryptogenic = 6, PSC = 1, Alcoholic = 1, autoimmune = 1), 36 (30%) patients: DM, 5 (4.1%) patients: HTN, Child A/B/C = 1/15/104, MELD = 17.8, 32 (26.6%) patients: HCC, 2 patients outside Milan, 16 (13%) patients: acute rejection, 5 (4.1%) patients: chronic rejection, 31/111 (28%) patients had HCV recurrence by biopsy (F0/F1/F2/F3/F4 = 3/24/3/1/0), 10 (8.3%) patients: CMV, 4/32 (12.5%) patients showed HCC recurrence, one patient had AFP 49000, 3 patients died with HCC recurrence. One year survival: 75.8%, 5 years & 10 years survival: 70%. Conclusion: 1- despite medical complications; acute and chronic rejection, HCV & HCC recurrence & CMV reactivation, patients' long term survival is adequate and is similar to international reported survival. 2- Despite limited resources of university hospitals, still adequate service and outcome could be achieved in multidisciplinary approach.

Using Calvin Grading System to Expose Early Recipient' Morbidity and Mortality in Living Donor Liver Transplantation

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Presenting Author: Mohammad Taha

Introduction: Adult living donor liver transplantation (LDLT) has wide variable. Reports of early recipient morbidity and mortality which differ widely among numerous institutions.
Aims: Our aims were to collect the early three months recipients' complications and put it into a simple and a standard grading system (Calvin classification system) to define and grade the severity of these complications.
Methods: We used the Calvin five grades system which was applied retrospectively for 174 consecutive adult recipients (April 2003 –January 2014). The incidence was determined of potentially (Grade III), actually (Grade IV), or ultimately fatal (Grade V) complications during the first post-transplant 3 months. When patients had more than one complication, only the most serious one is presented.

AN EQUATION CALCULATED FROM PRE OPERATIVE HEPATIC CT VOLUMETRY, CAN PREDICT THE ACTUAL GRAFT WEIGHT IN ADULT LDLT?

Presenting Author: Mohammad Taha

Introduction: The volumetric analysis of the liver using CT datasets has become an important for the preoperative assessment for LDLT. CT allows determination of the graft volume required by the recipient and the volume remaining with the donor. In borderline cases, minimal deviations in liver volume try may lead to a complications, such as SFSS or liver failure.

Objective: To determine the relative accuracy of CT volume try of right hepatic lobe graft weight in LDLT by comparing it with the intraoperative findings.

To have an equation which can predict the intra operative weight from pre-operative hepatic CT volume try.

Materials and methods: This is both a prospective and retrospective study conducted in National Liver Institute - Menoufiyia University - Egypt: from 2003 to 2013, 164 adult cases of LDLT had a contrast material–enhanced CT examination of the abdomen was included in the evaluation. The hepatic venous phase was used for preoperative CT volumetric measurement of the donor liver because, in this phase, the determining hepatic veins are depicted with maximum contrast. The intraoperative graft weight was measured and was compared with the pre-operative grafts volume.

Results:The pre-operative calculated Graft volumes is significantly correlated with & higher than the actual graft weights In our series there were 18 adult cases developed SFSS.

A linear equation was developed for accurate prediction of intraoperative graft weight: W inotrope = 216.4 + (0.6678 ×V preop)

Conclusion: The CT-volume try must be accurate to assure enough residual liver volume to the donor & not only enough volume to the recipient.

SFSS mostly developed with cal. GRWR < 1%, so we should use grafts with cal.GRWR ≥1%.

A linear equation was developed for accurate prediction of the hepatic graft weight prior to surgery.

EARLY (<6MONTHS) MORTALITY AFTER ADULT TO ADULT LIVING DONOR LIVER TRANSPLANTATION, SINGLE CENTRE EXPERIENCE

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Objectives: Despite rapid implementation of LDLT procedure, both complications and mortality of recipients are annoying problems. The aim of this study was to analyze incidence and risk factors of early (<6months) mortality of patients after adult to adult LDLT in a single center. Methods: Between April 2003 and February 2013, we performed 167 adult to adult LDLT in National Liver Institute, Egypt. We retrospectively analyzed early mortality in recipients. Results: The overall incidence of early mortality was 34.1% (n=57), it was classified into in hospital (28.7%) and post discharge (5.4%) mortalities. The most frequent causes of in hospital and post discharge mortalities were SFSS (10/48) and sepsis (5/9) respectively. On univariate analysis, the following factors were significant predictors of early mortality (Female gender, Lt Lobe graft, GRWR< 0.8, mean blood transfusion 10.8±9.8 units, the following complications (vascular, renal, chest, neurological, bacterial infection and SFSS). While on multivariate analysis by Cox regression, mean blood transfusion 10.8±9.8 units, vascular and neurological complications were independent predictors of early mortality. Conclusion: Mean blood transfusion 10.8±9.8 units, vascular and neurological complications lead to early poor outcome in our study, so decreasing amount of blood transfusion, prevention and proper management of vascular and neurological complications is required for better early outcome after A-A LDLT.

VASCULAR COMPLICATIONS AFTER LIVING DONOR LIVER RANSPLANTATION, MANAGEMENT AND OUTCOME.

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Objectives: Vascular complications (VC) after living donor liver transplantation (LDLT) are problems that result in graft and patient loss. The aim of this study was to assess the incidence, risk factors, treatment and outcome of VC of patients after LDLT. Methods: Between April 2003 and February 2013, we performed 200 LDLT. The overall male/female and adult/pediatric ratios were 168/32 and 167/33 respectively. We retrospectively analyzed VC in recipients. Results: The overall incidence of VC was 19.5% (n=39), while early (>1month) and late (<1month) VC were 9% (n=18) and 10.5% (n=21) respectively. Individually HA problems (HAT, HA stenosis and injury) 15% (n=30), PV problems (PVT and PV stenosis) 3.5% (n=7) and HV problems (HVT and HV stenosis) 1% (n=2). 37/39 of VC were managed by angiography (n=18), surgery (n=8) or medically (Anticoagulant and /or thrombolytic) (n=11) where successful treatment occurred in 17 patients. 10/39 (25.6%) of patients died as a direct result of VC. Preoperative PVT was significant predictor of VC in univariate analysis (P value < 0.05). The overall 1-, 3-, 5- and 7-year survival rates in our series were 65%, 61%, 55.5%, 55% and 54% respectively. The 1-, 3-, 5- and 7-year survival rates in patients with and without VC were 41%, 38.5%, 38.5% and 38.5% and 65.8%, 59.6%, 59% and 57.8% respectively with statistical significance. Conclusion: Preoperative PVT was significant predictor of VC in our study with significant poor outcome with VC, while effective management of VC significantly improved the outcome.

PREDICTORS OF SURVIVAL AFTER ADULT TO ADULT LIVING DONOR LIVER TRANSPLANTATION (A-ALDLT)

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Objectives: Adult-to-adult living donor liver transplantation (A-A LDLT) is an effective therapeutic modality to treat patients with end-stage liver disease. The aim of this study was to define the pre-, intra- and post- operative factors that may influence patient outcome. Methods: The data from 161 (A-A LDLT) patients who had operations between 2003 and 2013 were collected and analyzed retrospectively after exclusion of mortality due to intra-operative bleeding. Data were analyzed using uni- and multi-variant analysis according to factors that are known to be associated with outcome in these patients. Results: Overall, the accurate survival rate of recipients at, 6 months, 1, 3, 5 and 7 years was 67.7%, 63.4 %, 59.0%, 58.4% and 57.1% respectively. On univariate analysis, the following factors were significant predictors of survival, male recipients, Actual GRWR > 0.8, right lobe graft, blood transfusion<10 units and absence of vascucomplications. On multivariate analysis, male recipients, blood transfusion >10 units and absence of vascular complications were independent predictors. Conclusions: The reduction of intraoperative RBC, prevention and treatment of vascular complications, selection (GRWR > 0.8, right lobe graft and male recipients) are required to achieve better survivals among patients undergoing A-A LDLT.

MANAGEMENT OF BILIARY COMPLICATIONS AFTER LIVING DONOR LIVER TRANSPLANTATION: AN EGYPTIAN EXPERIENCE

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Presenting author: Ahmed A. El-Mikkawy

Introduction; Biliary tract complications remain one of the most common problems following living donor liver transplanatation (LDLT). The most common forms of biliary complications are biliary strictures and biliary leakage. Objectives; To assess the Egyptian experience in management and outcome of biliary complications after LDLT. Patients; 150 right lobe grafts recipients who had undergone adult-to-adult LDLT in Wady El-Neel Hospital, Cairo, Egypt from 2001-2008. Patients were divided into those with and those without biliary complications. Results; Overall biliary complications occurred in 52 patients (34.7%); including bile strictures in 30.7% and bile leakage in 4%. Risk factors associated with biliary complications were prolonged cold ischemia time, multiple donor ducts together with multiple biliary anastomosis. Table (1) shows the various diagnostic tools used for the diagnosis of biliary complications in our study and table (2) shows the treatment modalities used. Endoscopic interventions alone were successful in 38/50 patients (76%) and when combined with percutaneous methods (rendezvous technique), the success rate became higher (96%). Overall patient survival rates at 1, 2, 3 and 4 years were 90.07%, 84%, 80% and 77.30% respectively. Conclusion; Biliary complications after LDLT are relatively common, however, they can be successfully treated with nonsurgical approaches. Endoscopic retrograde cholangiopancreatography (ERCP), in particular, has proven to be relatively safe and effective in the management of these complications. The occurrence of biliary complications does not appear to adversely affect the long-term graft and patient survival.